

Full Length Research Paper

Developing local curriculum framework on water resource and disaster course for enhancing students' learning achievements in the basic educational system

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The aim of the paper was to administer and prepare teachers for management to their students' learning achievements within the curriculum framework of water resource and disaster management. This course was compared to manage learning into different school sizes with the sample size in the lower secondary education schools with two groups of 28 controlled teachers, who managed teaching of 68 students in 3 classes, and other group was 28 experimental teachers who managed teaching of 79 students in 3 other classes at grade level 9 too. The procedure of methodology included curriculum framework; unstructured selection interviews and conservational guidebooks were used. Most of teachers were trained with a new curriculum of learning units and training local curriculum. Associations between teachers' satisfaction of pre- and post- test questionnaires were differenced, developing the curriculum was indicated that it has revealed problems and students' needs indicted as high responses on introduction, and purpose of recapitulating development. Teachers were passed the assessment test as high quality ability impacts and satisfactions for making learning units to students' responsibilities. Statistically significance of students' achievements were differences between the controlling and experimental groups at .01 confidence level, correlatively, and comparisons between using this local curriculum frame work in school sizes as non significant differently.

Key words: Development, local curriculum framework, water resource, natural disaster course, enhancement, students' learning achievements and outcomes, the Basic Educational System, and Thailand.

INTRODUCTION

Education in Thailand

Education in Thailand is provided mainly by the Thai government through the Ministry of Education from pre-

school to senior high school. A free basic education of twelve years is guaranteed by the constitution, and a minimum of nine years' school attendance is mandatory. Formal education consists of at least twelve years of

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basic education, and higher education. Basic education is divided into six years of elementary education and six years of secondary education, the latter being further divided into three years of lower- and upper-secondary levels. Kindergarten levels of pre-elementary education, also part of the basic education level, span 2–3 years depending on the locale, and are variably provided. Non-formal education is also supported by the state. Independent schools contribute significantly to the general education infrastructure. Administration and control of public and private universities are carried out by the Office of Higher Education Commission, a department of the Ministry of Education (Ministry of Education, 2014).

School structural education in Thailand

The school structure is divided into four key stages: the first three years in elementary school, Prathom (ประถม) 1–3, are for age groups 7–9; the second level, Prathom 4 through 6 are for age groups 10–12; the third level, Matthayom (มัธยม) 1–3, is for age groups 13–15. The upper secondary level of schooling consists of Matthayom 4–6 for age groups 16–18 and is divided into academic and vocational streams. There are academic upper secondary schools, vocational upper secondary schools and comprehensive schools offering academic and vocational tracks. Students who choose the academic stream usually intend to enter a university. Vocational schools offer programs that prepare students for employment or further studies. From early 2001, the Ministry of Education began developing new national curriculum in an endeavour to center the system of education on the child, or student-centered learning methods (Ministry of Education, 2014). The years from 2001 to 2006 showed some improvements in education, such as computers in the schools and an increase in the number of qualified native-speaker teachers for foreign languages. Experiments with restructuring the administrative regions for education or partly decentralizing the responsibility of education to the provinces were conducted. By 2008, however, little real change had been made, and many attempts to establish a clear form of university entrance qualification had also failed due to combinations of political interference, attempts to confer independence (or to remove it) on the universities, administrative errors, and inappropriate or mismatched syllabuses in the schools (Education Department of Bangkok Archdiocese, 2014).

Development of the curriculum to administer in the system education in Thailand

In formal education, a curriculum constitutes the planned interaction of students with instructional content, materials, resources, and processes for evaluating the

attainment of educational objectives. This process includes the use of literacy and demagogues that are interwoven, through the use of digital media and/or texts that address the complexities of learning. Other definitions combine various elements to describe curriculum as all the learning that is planned and guided by the school administrator (Kerr, 2009). Skills, performances, attitudes, and values are expected to gain from schooling by pupils. It includes the content of courses (the syllabus), the methods employed (strategies), and other aspects, such as norms and values, which relate to the way in which the school is organized. The courses are arranged in a sequence to make learning a subject easier. In schools, a curriculum spans several grades. The curriculum can refer to the entire programme provided by a classroom, school, district, state, or country. A classroom is assigned sections of the curriculum as determined by its school (Nairs and Fisher, 2001).

However, the 2000s was a time of learning and teaching reform in Thailand. Secondary education improves the quality of life of students and serves as the basis for further education. It should: (a) help students discover their own abilities, aptitudes and interests; (b) provide a general education as the basis for securing honest occupations or further education; and (c) respond to the needs of the localities and the nation as a whole. Based on these aims, the curriculum is designed by the Ministry of Education for students to develop the following characteristics: knowledge and skills in general education subjects as well as the ability to keep up with academic advances; the ability to maintain and enhance personal and community health and hygiene; the ability to analyze community problems and to choose suitable alternatives for solving them, taking into account various limitations; pride in being Thai; the ability to live in peace with others and to willingly help others within the limits of one's capability; creativity and the ability to devise and improve (Ministry of Education, 2008).

In the 2010s, the Ministry of Education and the Office of the National Education Commission (ONEC), a department of the Office of the Prime Minister, began programmes of educational research. In-depth research, particularly of the ONEC, contributed to the education reform initiative of 2008–2012, and extensive research is provided by the country's universities, especially in faculties of education. The Department of Curriculum and Instructional Development of the Ministry of Education also conducts research into testing, curriculum, and content. The National Library, university libraries, and other libraries around the country are electronically networked in order to facilitate research for educational reform in Thailand (The National Education Commission (ONEC), 2014).

As far back as 2002, the Ministry of Education announced experimental application of the Basic Education Curriculum 2001 in its pilot and network schools. Mandatory implementation was subsequently effected in all schools providing basic education from

academic year 2003 to the present time. Various agencies with direct responsibilities, as well as those concerned, have continuously followed up and evaluated the application. Different strengths identified have proved to be quite gratifying. In fact, the application has been found to facilitate decentralization of educational authority, enabling local communities and educational institutions to participate and make significant contributions to preparation of curriculums that met their real needs. Clear concepts and principles for promoting learners' holistic development were quite apparent.

Nonetheless, the outcomes of the studies revealed several problems and issues of concern arising from shortcomings of the 2001 Curriculum. Problems and issues of concern included the Curriculum provisions, application process and results. Among the problems identified were confusion and uncertainty faced by practitioners in educational institutions in preparing school curriculums; the majority of schools were ambitious in prescribing learning contents and expected outcomes; measurement and evaluation did not correlate with the standards set, with negative effects on certification and transfer of learning achievements. Furthermore, issues of learners' quality resulting from acquisition of essential knowledge, skills, capacity and desirable characteristics and attributes were quite disconcerting.

Consequently, the Office of the Basic Education Commission (OBEC), under close supervision and wise guidance of the Basic Education Commission, took necessary measures to revise the Basic Education Curriculum 2001 in order to prepare the subsequent Basic Education Core Curriculum 2008. In so doing, OBEC availed of the outcomes of the studies undertaken and benefited from the data and information provided in the Tenth National Economic and Social Development Plan (2007-2011). Pertinent research results and projections led to greater clarity regarding the goals of improving learners' quality and curriculum application at school and educational service area levels. Succinct information is presented regarding the vision, goals, learners' significant capacities, desirable characteristics and attributes, learning standards and relevant indicators, allotted time to each subject area for each grade level, and evaluation criteria that correlate with learning standards and consequently facilitate curriculum implementation. All these measures were aimed at providing schools with desirable orientation and guidance for preparation of the curriculum required for each level of education. The Basic Education Core Curriculum 2008 also allows opportunities for further amplification in accord with the schools' priorities and readiness.

THE BASIC EDUCATION CORE CURRICULUM 2008 AD

The Basic Education Core Curriculum 2008 thus prepared

will undoubtedly provide all educational service area offices, local offices and basic education institutions under jurisdiction of various agencies with an appropriate framework and guidance for preparing the pertinent curriculum. The basic education to be provided to all Thai children and youths will be of higher quality in regard to acquisition of essential knowledge and skills required for learners' lives in the constantly changing society. Learners will also be able to acquire knowledge for continuous lifelong self-development. On behalf of the Basic Education Commission will henceforth be most beneficial to educational provision for the Thai people (Samudvanijja, 2012).

The last decade in particular has seen the development and reform of the education system in Thailand, with the government changing the core curriculum in 2008. The schools were to revise their curriculum to teach students more about the natural source of their surrounding environments, namely their local; water, mineral, or forestry sources (The Center of Khon Kaen News, 2011). Normally, students follow a core curriculum and are able to select additional curricular components. The local curriculum was used to manage and arrange for additional students' learning in some schools. This local curriculum should be based on relevance to community and local needs, and confirmed to indicate that all students' management. A new local curriculum framework was administered and integrated for the needs of the local community by the educational institutions in their areas. However, the schools faced too many problems trying to integrate the local curriculum framework into their learning management. Some part of curriculum teaching and learning, where teachers' knowledge was insufficient for teaching and understanding.

Developing local curriculum framework on water resource and disaster course for enhancing students' learning achievements in the basic educational system

The most critical environmental problem that Thailand is currently facing water is pollution. Despite the annual southwest monsoon, Thailand is subject to drought, particularly in its northeastern region. As of 2002, Thailand had less available water per person than any other country in Asia, and nearly one third of its water was "unsuitable for human consumption." Inconsumable water was also a result of increasing amount of untreated domestic sewage, industrial wastewater and solid hazardous wastes (ThailandOutlook.com, 2007).

In Thailand, major disasters over the past three years (2011-2013) provided stark reminders of the risks of the natural disaster that affect human well-being and future development. The trend of increasing exposure and greater losses associated with disasters demands a better understanding of their complex nature and common

causes, namely hazards, exposure, vulnerability and resulting risk. Many disasters have occurred in Thailand, leading to loss of life and economic damage. Most natural disasters that have happened in the country are storm- and flood-related, while man-made disasters have also caused great losses. This page lists by date those accidents and disasters which have caused significant losses, or have been the focus of national public attention; which are grouped into natural disasters, promoting investments for resilient nations and communities (ADPC's News, 2014).

Focused on the Northeastern region of Thailand, the great flood spread throughout the 20 provinces of Thailand; for example, in Khon Kean province, the flood plain area of Chi and Nam Phong watershed rivers. Water stream explored up overflow and cover wetland district areas, such as; Muang, Ubon Rattana, Chonnabot, Wang Yai, Wang Noi, and Manjakili Districts. This effect destroyed the rice fields and agricultural areas that were covered in the huge acres of water, the people and their families who live at the back of Ubon Ratana Dam were forced to move into the hills or to higher places temporarily, and many schools were closed. The most important problem here is how to change learning and teaching behaviours on natural flood plain or drought disaster effects. According to the curriculum orientation guidelines, teachers ought to be focusing on: (a) integrating content from daily life; (b) making greater use of activities, rather than textbooks; (c) using different learning materials in a variety of ways; (d) making students the centre of learning activities; and (e) reducing explanation and helping students. These take more time to prepare and teach according to the designated teaching/learning curriculum orientations. It is anticipated that these problems will be solved in the forthcoming process of reforming curriculum and learning activities (Ampra and Thaithae, 2008). Thailand's development agencies perceived water resource development as a key strategy toward stimulating modern economic development was built. Despite more than three decades of planning and the construction of numerous large-, medium- and small-scale water projects intended to increase water availability and improve standards of living, the river ecosystems and human communities of Northeast Thailand are instead experiencing a host of interrelated problems including water shortages, pollution and social conflict centered on water. These problems are readily evident in the Nam Phong River basin (Figure 1).

Since the construction of the Ubolratana Dam in 1966, the Nam Phong River basin has been the focus of intensive planning and management initiatives carried out by an assortment of state agencies in the hopes of stimulating regional economic development were destroyed. Results have been mixed. Most recently, controversy over environmental degradation erupted after several industries released toxic substances into the river

in the early 1990s. Galvanized by these highly publicized incidents, a coalition of state agencies, academics, business leaders and non-governmental organizations (NGOs) have spearheaded efforts to develop an effective action plan for management of the river's water quality. The action plan, in effect, calls for cooperative management, or co-management, of the river among a set of stakeholders with diverse interests toward and interactions with the biophysical processes and structures that comprise the river basin.

In terms of local curriculum framework, regional trends in the development of curriculum policy have been changing to include a particular focus on the greater participation of stakeholders in policy formulation throughout of the world, notably, in Thailand in particular. This only strengthens the political rationale for the decentralisation of education of governance and management. A second important rationale is a concern for improving the quality of education. A crucial dimension of quality education is that of relevance of curricula content in the form of; the diversity of local (sub national), cultural and socio-economic realities. The promotion of local curricula is a strategy to ensure such relevance and is an important component of the decentralisation of education, governance and management. When looking at the situation caused by flooding and national disasters as they continue to escalate worldwide, governments, schools, teachers, students, and local response, respectively. For this reason, students in Thailand or South African should be taught a local curriculum framework in their school.

Focusing on the development of the methodological curriculum orientation guidelines on water resource and water disaster courses; the purpose of this study is to emphasize the way in which administrations handle their water resources, and their readiness and ability to confront natural disasters when students are effectively trained through the curricula to respond to them. The curriculum is designed to permit students to develop to knowledge and skills in general education subjects and the ability to keep up with academic advances in lower secondary school classes. For these important reasons as above, researchers were developed the learning unit so as to onto investigate the problems and needs for developing the local curriculum framework of the basic education commission with regard to the objective of a water resources and disasters course that served to integrate content from daily life, making greater use of activities, use different learning materials in a variety of ways, making students the centre of learning activities; and reducing explanation and helping students of their high quality of students learning and sustainable forever from curriculum orientations (Department of Basic Education Commission, 2009).

This research study, titled "Developing Local Curriculum Framework on Water Resource and Disaster Course for Enhancing Students' Learning Achievements in the Basic



Figure 1. The Ubolratna Dam protects at Nam Phong River Basin launches on water floods and students ought to learn and protect from natural disaster.

Educational System”, was launched in high-risk lower secondary schools in Thailand in 2013-2014 and is ongoing. The research study first aimed to secure recognition and understanding of natural hazards, including the potential impacts these can have on personal environments and social development. The research also aimed to develop water source and disaster prevention and mitigation knowledge and skills among families, schools, and communities, and knowledge of natural disaster response measures for extreme situations. The research approach is highlighted in Figure 2.

METHODOLOGY

Research objectives

1. To investigate the students' problems and needs for developing the local curriculum framework of the basic education commission.
2. To develop the local curriculum framework of the basic education commission.
3. To plan for interaction of students with instructional content of training teacher curriculum framework on learning units.
4. To compare the effects of using the curriculum framework between training teachers for using curriculum framework and conventional learning curriculum.
5. To compare learner achievements by means of comparison between this curriculum group and a conventional learning curriculum group with the curricular content concerning water disaster management for the different school sizes; large, medium, and small.

Sample Sizes

Step I: Research Process and Development

This study was administered in a randomly selected sample of 217

schooling directors and teachers, 12 professional scientists specializing in water resource management and water disaster, 9 professional educators specializing in curriculum and instruction with the purposive sampling technique for planning the new local curriculum framework to teachers' management for teaching.

Step II: To Tryout of the Curriculum Framework

To select the tryout sample size with the 5-secondary education teachers who were teaching on the science learning and social sciences groups, religions and cultures learning group to their students at grade level 9th in the Khon Kaen Primary Educational Service Area Office 4 and the Secondary Educational Service Area Office 25.

Step III: To Investigate the Curriculum Framework Efficiency

The curriculum framework efficiency was to administer with the sample size of 56 secondary education teachers, 2 separated groups of the 28-controlling teachers and the 28-experimental teachers groups with a multi-stage sampling technique, and 56 controlling students' group in the 3 classes and 79 experimental students' group in the 3 classes too at the same grade level 9 in the Khon Kaen Primary Educational Service Area Office 4 and the Secondary Educational Service Area Office 25.

Research instruments

1. The questionnaire on teachers' and students' perceptions of their responsibilities to their problems and needs when it comes to developing a curriculum framework on water resource management and water disaster content for learning and teaching.
2. The unstructured selection interview instrument used for teacher's and learner's interviews
3. The conservational guidebook instrument was reporting data records.

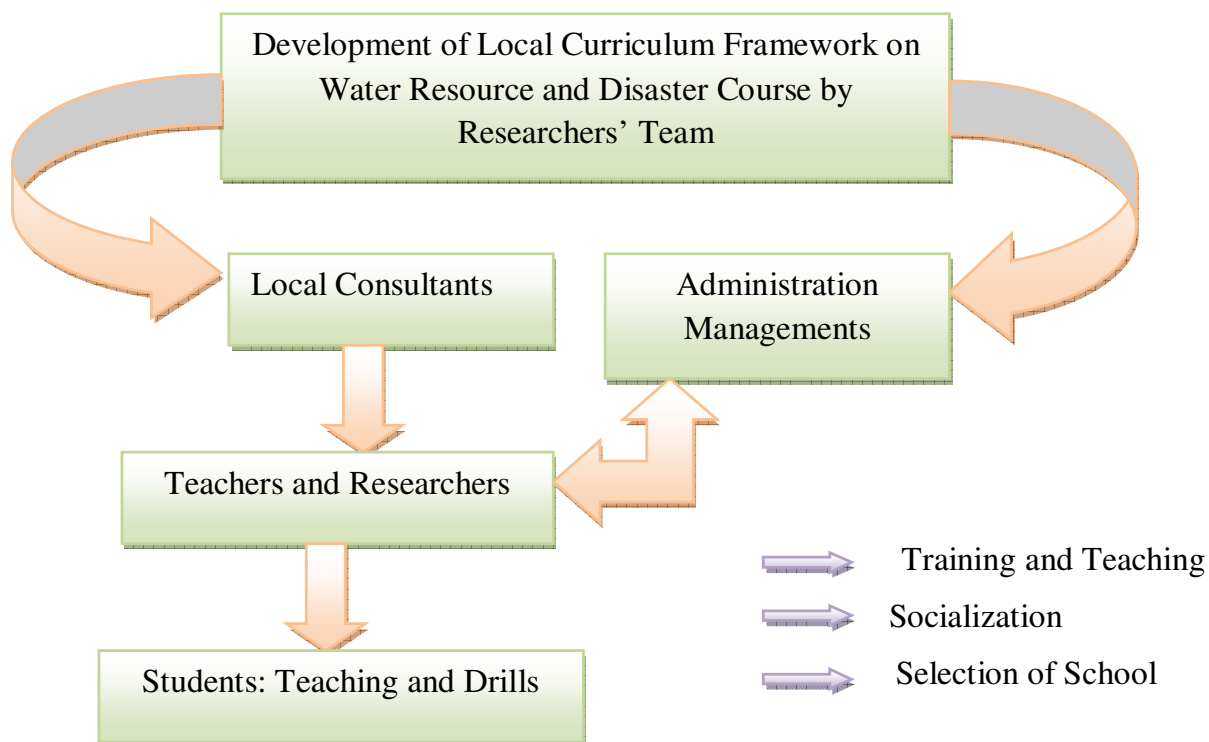


Figure 2. Development of local curriculum framework on water resource and disaster course in Lower Secondary Schools approach.

4. Training teacher curriculum document.
5. Practicing documents for training teachers
6. Pre and post training teacher tests
7. Training teacher satisfaction questionnaire instrument for teachers' perceptions on their satisfied training teacher curriculum framework.
8. Quality assessment document instrument was assessed to learning units of curriculum trainee.
9. The pre and post evaluations of students' achievements were assessed.

RESULTS

Teacher' and learner's perceptions of this curriculum framework on the 4 scales of school personnel, learning activities with teachers, innovations and learning sources, and assessment and evaluation scales, were of medium level quality. Teachers indicated that this curriculum framework held too few problems. The learning methodologies, instructional technique, teaching and learning process were to the satisfaction of the learner groups.

The local curriculum framework of participations in sequent steps onto introduction, recapitulation of learning purpose, the 7 Learning plans, such as; water resource, water basin resource, water resource management, natural disaster management, approach strategy policy on natural disaster management, local folk wisdom of water management, and specified keywords of water

resource and natural disaster management learning groups. The quality of students' outcomes and using the curriculum framework of the water resource and natural disaster management has to be transferred to the basic education commission, successfully.

The purpose of the teacher training curriculum framework was to develop the knowledge and ability of teachers to plan a learning unit on the water resource and natural disaster management. An experimental practice and training plan theory was used over 2 days with a training session over 3 days. Training instruments were composed of training curriculum documents, including; training a guide document; a trainee document; learning unit sampling; pre- and post- assessing tests; the teachers' satisfaction questionnaire; and the quality assessment on learning units. This study found that teacher's perceptions were confirmed with the guideline of the professional curriculum framework and Index of Item-Objective Congruence value (IOC) of 1.00 and appropriately average values of 1.00, and the quality assessment of learning unit making confirm with the Item-Objective Congruence value (IOC) of 0.96, and the teacher's achievement throughout of pre and post assessments with an Item-Objective Congruence value (IOC) of 0.97.

These results indicated that the problems of four respective levels of school personnel, learning and teaching activities, learning media and source, and

assessment and evaluation scales, were to some degree variable in efficiency. In terms of the learning and teaching problem scale, it has been indicted that teachers needs to teaching at the often alternative or high level of their learning unit of water resource and water disaster course to their high quality of teaching and needed to the format or technique, or methodology of their satisfactory teaching on learning unit group.

Focusing on developing the local curriculum framework, it includes an introduction, students' goals for their development, the seven-learning sub-content categories, such as; water resources, water basin sources, natural disaster administration, the approach strategy for natural disaster was administered, local folk wisdom in water management, and key words for water and disaster management sub-contents. The important factors of the local curriculum framework of water source and disaster content were used into educational institutes.

In terms of the training and practice, the curriculum framework for the course to students' learning units to their developing knowledge of students' contents and abilities were trained. Using the experimental workshop and training contents for students on 2-3 days with the 3 training topics, such as; training instruments, training texts, training guidebook, training trainee document, learning unit samples, pre and post assessing tests, the questionnaire on teacher satisfaction, and the questionnaire on teacher's curriculum unit quality. It was found that this curriculum framework conformed to the professional guideline of this curriculum, where the index of Item-Objective Congruence value (IOC) was 1.00; appropriately average values were 1.00; the quality assessment of learning unit making confirm with the Item-Objective Congruence value (IOC) was 0.96; the teacher's achievement throughout pre- and post-assessments with the IOC value was 0.97, and the questionnaire on teacher satisfaction indicated that the average IOC value (IOC) was 0.94.

Using the curriculum framework for training and practicing teachers, the 28-training teacher scores were more than 70%. Teachers were able to build the learning unit of the curriculum framework, water source and natural disaster courses; completely from 5 teachers who trained the learner groups and 23 teachers built the curriculum framework as high qualities. Focusing on teachers' perceptions of the questionnaire on teacher satisfaction, it was found that, overall their perceptions were too higher level.

Learner outcomes and achievements of their learning and normal learning to their local curriculum framework, using the learning unit of water source and natural disaster content of the two groups between the experimental learning and normal or controlling learning groups in the 3-school size as large, medium, and small school sizes. It was found that the experimental students' group had far greater learning achievements that the control group, and statistically significant differences were found at level .01, and students' controlling group at the 3-

school sizes indicated that non significantly difference between different school sizes.

DISCUSSION

Discussion I: Research accordance

The results of this study indicates that the teachers' and students' responses of the problems and needs for developing the local curriculum framework of the basic education commission was to accordance of view points, especially, administrations of teaching and learning activities with the intervening informative of students' learning water source and natural disaster learning units. Teachers used the innovations or learning Medias and learning source, to emphasis for students' outcomes of their assessments. The data of personnel, learning and teaching activity methods, learning source, assessment and evaluation, and teachers' problems and needs these were reflected of teachers' teaching managements. Students improve on their knowledge and ability for their developing learning to their self-development, community, family, local, and to be use of their life forever. The Thai's government should introduce water resources and disaster content into the basic curriculum at the lower secondary level, because Thailand is located on at monsoon continent, and is likely to be faced with continuing floods and water-rerated disasters every year, with its greatest flood so far occurring as recently as 2011.

Discussion II: Research on developing local curriculum framework

In terms of the developing a local curriculum framework on the management of water sources and disasters for the basic education commission, it was found that the factors determined for school, community, and local community's needs of this local curriculum were as the introduction, goal and emphasizing development of learner, informative learning, students' assessment quality, the new local curriculum framework of water source and disaster contents into students were used and commented with the professional scientists and educators in the local area to uprightness and accuracy crisis, students' ability learning crisis, importance content and concernment crisis (Utthanan, 2009). This local curriculum framework is the first curriculum that satisfies the basic educational students at Grade levels 1–12, where the educational institutes apply for use and development to teaching and learning managements that followed as contexts, problems of students' needs, communities and local wisdoms. This result was confirmed with the studied of Padsin (2008), who reported the development of a learning unit on Lam Pao Flood Plain Environment school group.

Discussion III: Research on developing local curriculum framework

Focusing on the training and practicing of teachers in a local curriculum framework with learning units on the management of water resources and disasters for the basic education commission, This study indicates that the new local curriculum framework composes of the understanding knowledge development for teachers who are the leadership of this curriculum of their teaching, teachers' satisfaction and use are greater quality efficiency that these confirm with the core intentional curriculum government. Fullan and Stiegelbauer (1991) reported that teachers and connected personnel were the foundational factor propelling educational innovation and the curriculum successfully. Teachers should adjust their thinking and teaching to their understanding obstruction for modernizations.

Discussion IV: Research on efficiency for using local curriculum framework

These results indicate that the efficiency's using of a local curriculum framework to the management of water sources and disasters for the basic education commission for teachers and trainees are able to learn and invent the learning units. Teachers complete of their assessment to their training processes of the curriculum that follows as the dissemination of thinking, the importance and necessity of learning management framework for teachers and school administers, the directly emphasis on thinking of teachers' acquiescence, it was confirmed that Chaipayana (2005) and Sittisomboon (2003) who reported the volunteer and network trainers' efficiencies were greater satisfaction and friendly of the curriculum unit for students' learning use who sat at Grade level 6 by the practicing curriculum processes.

Discussion V: research on students' achievements

To compare between the 2-learner groups of the experimental learning group and the normal learning group for assessing students' achievements who sat in the different school sizes; large, medium, and small schools. Of statistical significance were differences learning achievements between the two group, the experimental group was higher than normal group at level .01, with students' solving problem projects were presented and academic on water source and disaster exhibition of students were satisfaction from the communities and local folk wisdoms, for example; Drought in Our Home Project, Drought at Ubon Rattana Dam Project, Modernised Children on Nam Phong River Conservation Project. These students' projects confirmed with the studies of Silanoi et al. (2005) who reported of students' mind consciously to environmental conservation.

In the last decade, previous research reported that the students' achievements of their learning with the post-assessment were greater than pre-assessment; students' training and using the curriculum were more understanding learning activities than the conventional teaching. (Australian Qualifications Framework, 2011; Fullan and Stiegelbauer, 1991; Nuttrawong, 2010; Utthanan, 2009; World Bank, 2003).

SUGGESTIONS

Suggestion I: Policy Suggestion

Organizations, institutes, the Primary Educational Service Area Office, and the Secondary Educational Service Area Office ought to specify policies that support and promote the propagation of the local curriculum framework concerned with management of water sources and disasters of the basic education commission to manage and arrange a local flood or flood plain or drought areas for cultivating moral traits for primary and secondary educational students who are able to be emphasized on their acknowledge and appreciation to include experiencing skills. Students were being used the water responses and water management to adapt of their daily life. Students with their families and communities are able to apply this curriculum for the quaintly and sustainable of their life. Teachers should be trained and practiced in this local curriculum so as to promote the investigation, improvement and adaptation of their teaching within the core curriculum system. Educators and professional occupations should investigate a local curriculum framework for suitability and possible of students' achievements. Using the curriculum framework policies was to apply suitably of the natural disasters and drought situations for local area and regional contexts to human source and communities' necessary for protecting and affecting the natural disasters in differentiated of time and learning on types of disaster by the training professional participators and assessors from specify supervisors.

Suggestion II: Applications on Using Curriculum Framework

In terms of the applications for developing and using a local curriculum framework on management of water sources and disasters such as this for the basic education commission, the Primary Educational Service Area Office, along with the Secondary Educational Service Area Office ought to be planned and administered of the curriculum for educational institutes to cautious and covers of sub content of the core curriculum. The use of curriculum framework documents ought to confirm to the needs of school and the community. Human resources ought to be developed continually and seriously for their knowledge, skill, and experience in teaching and learning

management, which it follows as the local curricular framework of this content. The administration supports the curriculum prototype, understands the point of straightly and weakly of this curriculum, participates of students, revises data assessment, and learns from personnel suitability by the organisation or educational institute to solve the problems and obstructions of students' playfully. School administrators should build a friendly school environment in cooperation, and plan towards sufficient budgets for developing school curricular on management of water sources and disasters on behalf of the basic education commission.

Suggestion III: Suggestion to Present that Based on the Research Objectives

Because the objectives of this research are to investigate the students' problems and needs for developing the local curriculum framework of the basic education commission, researchers and educators emphasize high standards as an important factor in improving the quality of education for all students. As a result, schools and districts are looking at ways to develop a high-quality curriculum that is based on the core curriculum standards of education in Thailand. An important starting point for this effort is a carefully thought-out curriculum framework that reflects the developments and goals for which the education community is willing to be held accountable. Developing a standards-based curriculum requires changes in the way teachers teach and schools are run, so care must be taken to build capacity for all educators and to provide adequate time for implementation, monitoring, and evaluation of the curriculum. The curriculum-development process also should provide opportunities for reflection and revision so that the curriculum is updated and improved on a regular basis.

In terms of the second objective is to develop the local curriculum framework of the basic education commission, problems and issues of concern included the provisions, application process and outcome of the curriculum. The problems identified were confusion and uncertainty in preparing school curriculums; schools' ambition in prescribing learning areas and expected outcomes; measurement and evaluation did not correlate with the standards set, which effects on preparation of certifying documents and transferring of learning outcomes. Furthermore, issues of learners' quality resulting from acquisition of essential knowledge, skills, capacity and desired characteristics and attributes were quite disconcerting.

Focused on the third objective is to plan for interaction of students with instructional content of training teacher curriculum framework on learning units. Most Thai students learn the basic core curriculum facts and formulas but many of them are unable to use this knowledge to solve everyday problems. Teachers participated in the creation and review of the standards for the

curriculum framework on water resource and disaster content for enhancing students' learning achievements through their professional organization. Many teachers and many schools communities-both prior to and subsequent to the release of the standards in the basic core curriculum of education of Thailand 2008 have tried to provide the meaningful learning experiences implicit in the standards.

Finally, to suggest of comparisons between the effects of using the curriculum framework for training teachers and conventional learning curriculum, integrating standards into this curriculum is a complex endeavor that brings added dimensions to the curriculum-development process. Traditionally, the school curriculum provides a plan of instruction that indicates structured learning experiences and outcomes for students. It specifies the details of student learning, instructional strategies, the teachers' roles, and the context in which teaching and learning take place. More recently, however, the standards movement, research on teaching and learning, and research on the characteristics of successful schools ought to have broadened the scope of curriculum to include everything that affects what happens in the classroom and consequently affects student learning.

Suggestion IV: Further Research Suggestion

It is suggested that the further research lead this local curriculum framework to be administered throughout educational levels, and it ought to develop continually. The suitability of this curriculum framework may change to follow as the time and modernisation data to adapting detail of a new effect for the new curriculum along with content changes. The new curriculum should study effects and determinants of following this curriculum so as the conformation to take this adaption and improvement of the curriculum to merit and limit of learning management and process to other learning subject groups.

Conflict of Interests

The authors have not declared any conflict of interests.

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